

Abstract

A modular fluid flow system is provided with selectable features. One feature is a substrate design that is sculpted or contoured to improve air flow when the substrate is installed in a modular system. Also provided is a valve concept in which a third port, such as a purge port, is formed coplanar with inlet and outlet ports of the valve, but the third port is not collinear with the other two ports. A mounting arrangement is provided that uses a releasable clamping feature to secure a substrate to support members, thereby avoiding threaded connections therebetween. Fluid component seal surfaces are also formed by work hardening methods to provide hard metal to metal seal surfaces even for soft bulk material such as cast metal.